IPE
APR 05 2007
PATENT & TRADEMARK OFFICE

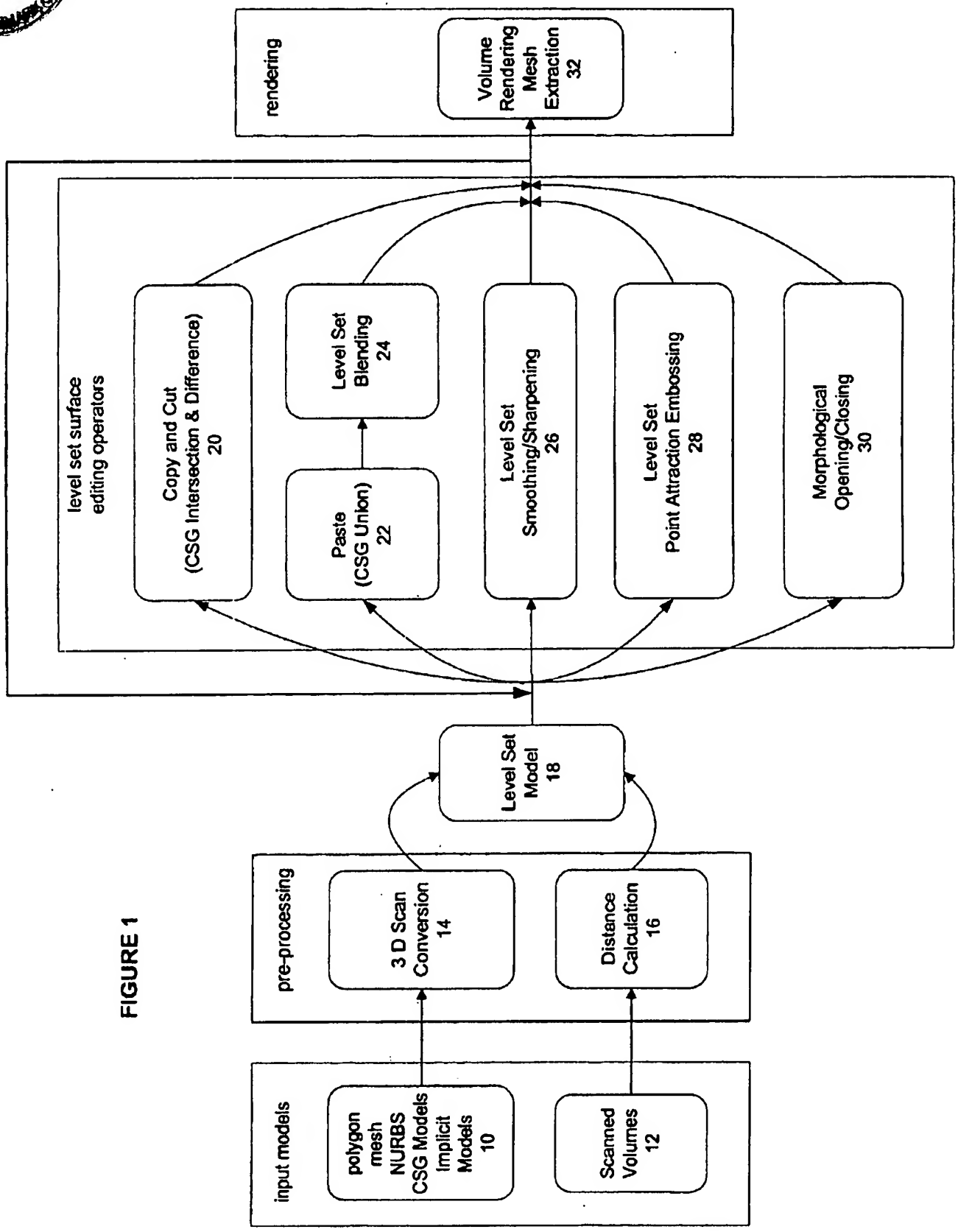

FIGURE 1

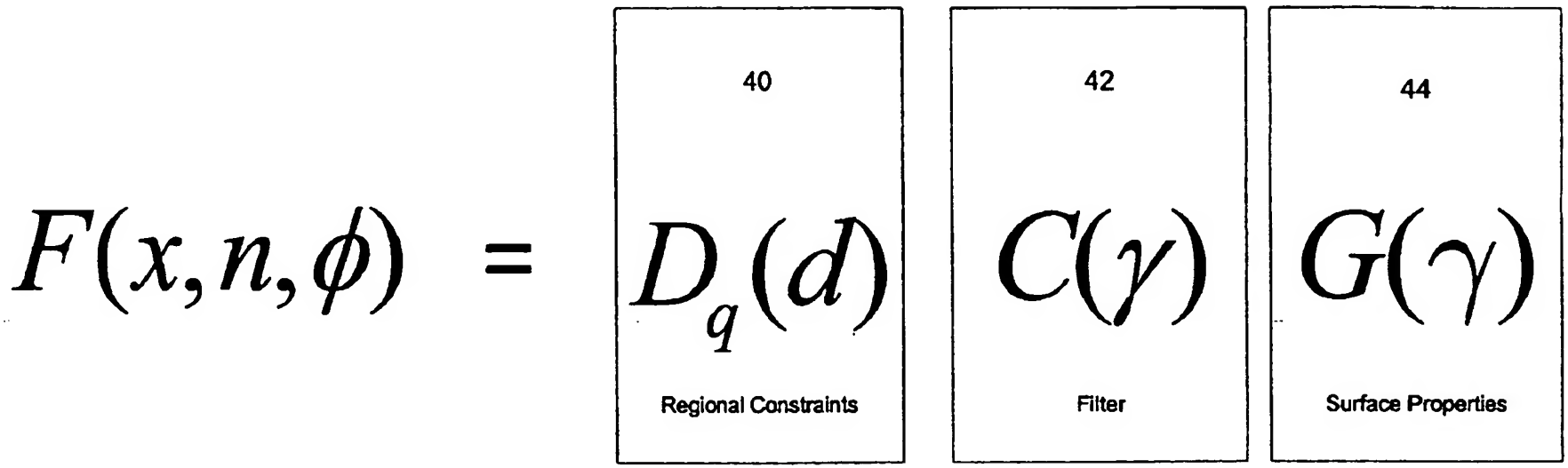
$F(x,n,\phi)$ =
40
$D_q(d)$
Regional Constraints
42
$C(\gamma)$
Filter
44
$G(\gamma)$
Surface Properties

FIGURE 2

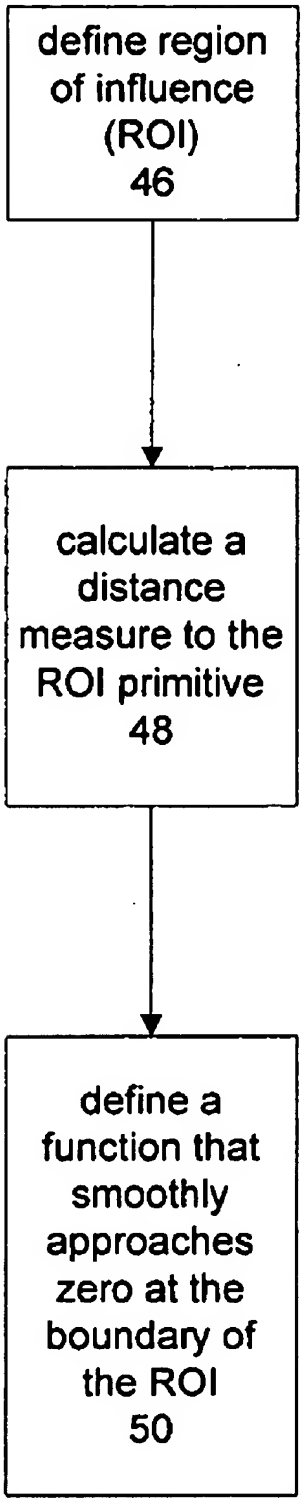
define region of influence (ROI) 46
calculate a distance measure to the ROI primitive 48
define a function that smoothly approaches zero at the boundary of the ROI 50

FIGURE 3

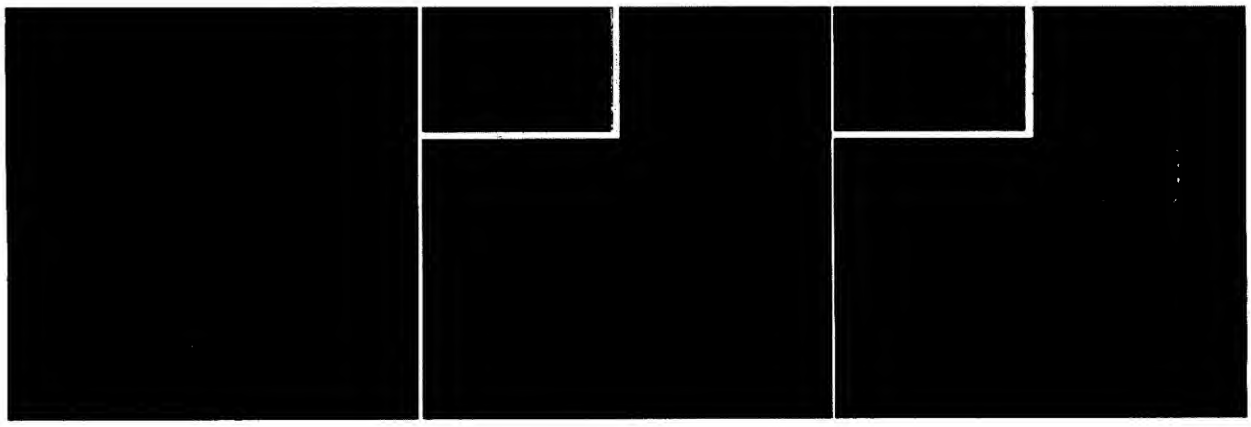

FIGURE 4

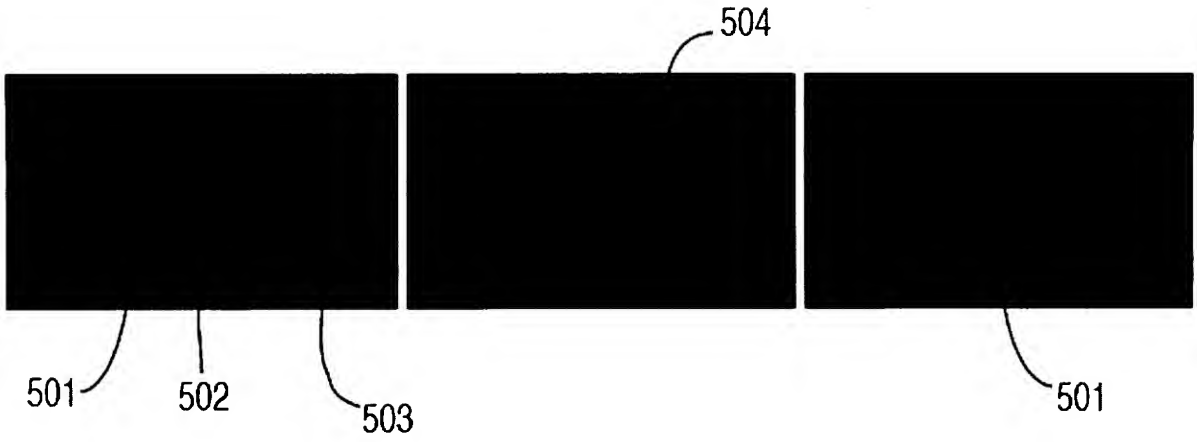

FIGURE 5

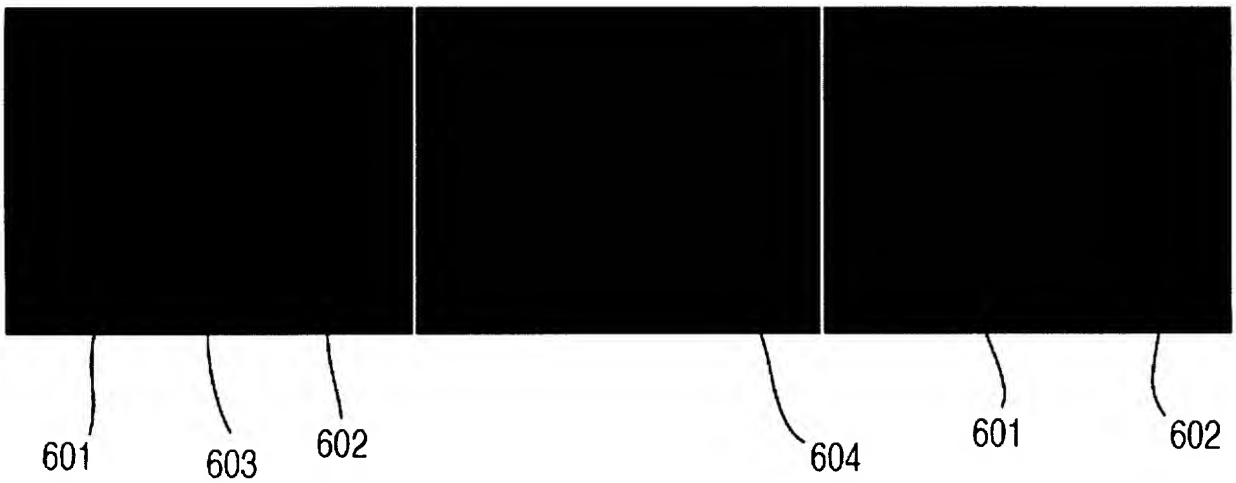

FIGURE 6

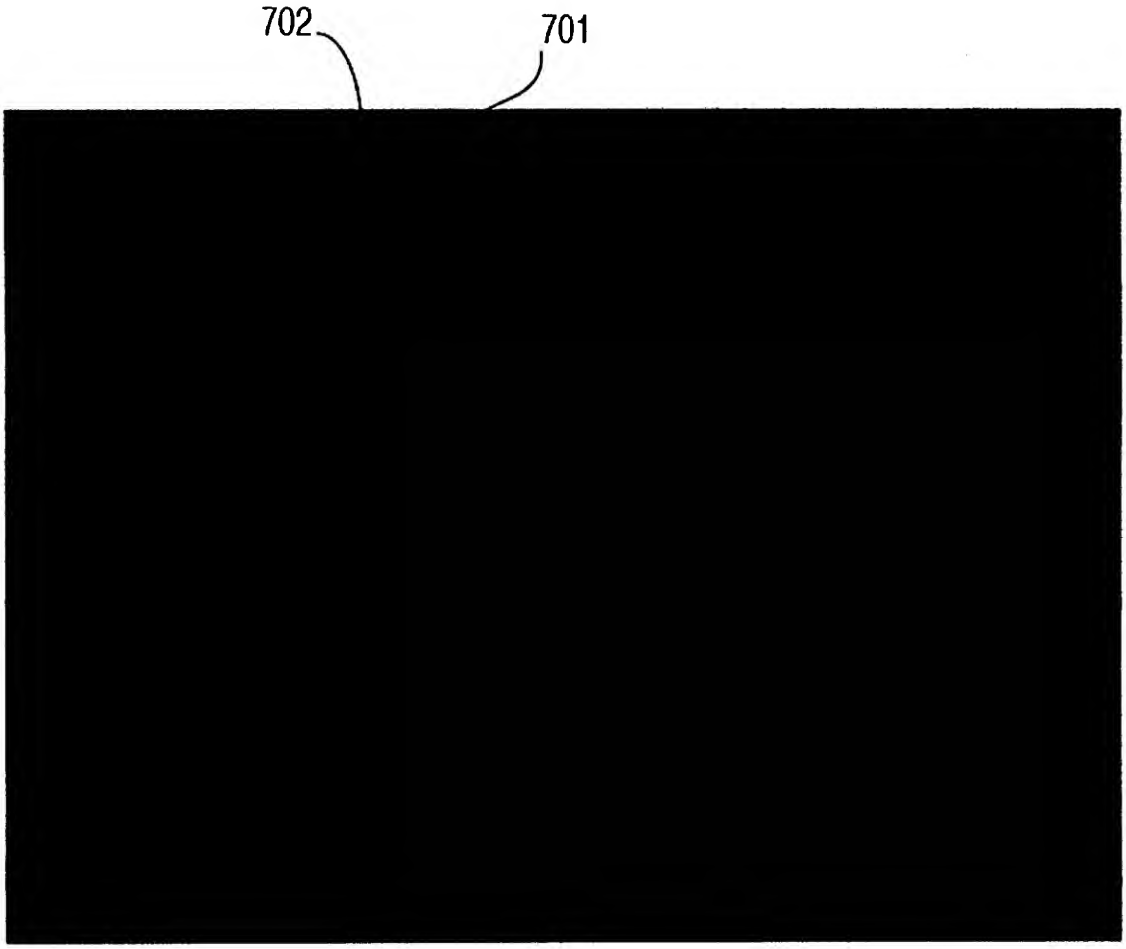

FIGURE 7

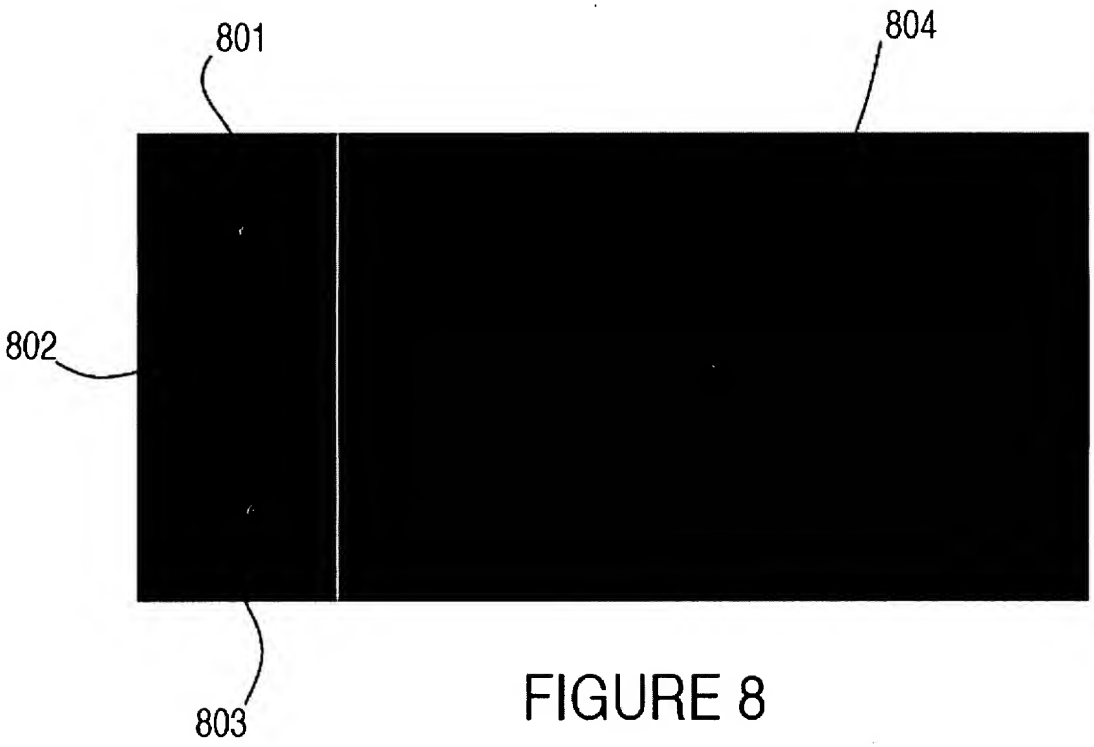

FIGURE 8

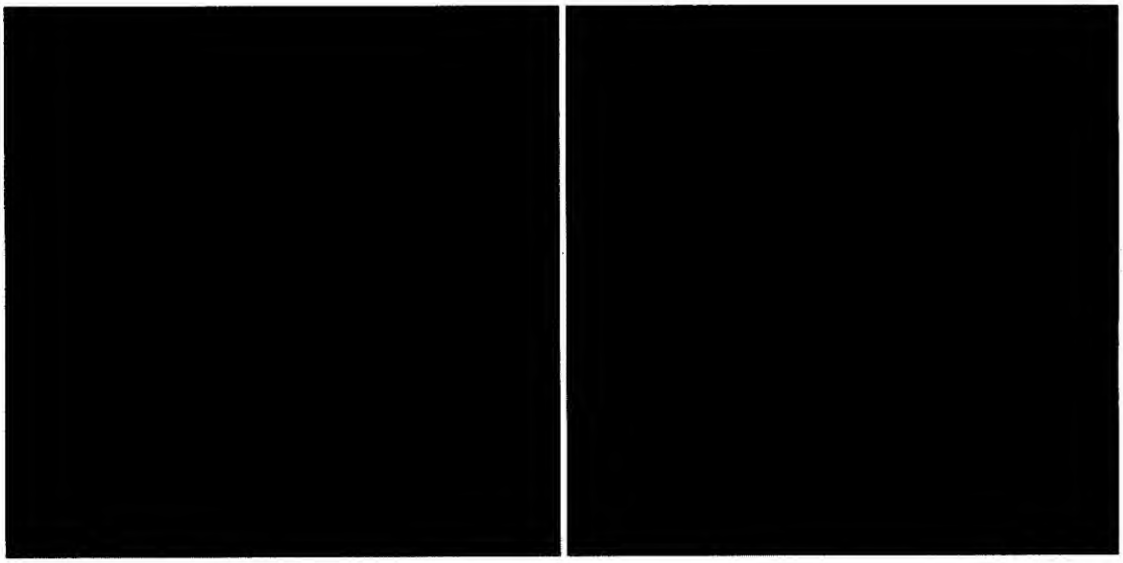

FIGURE 9

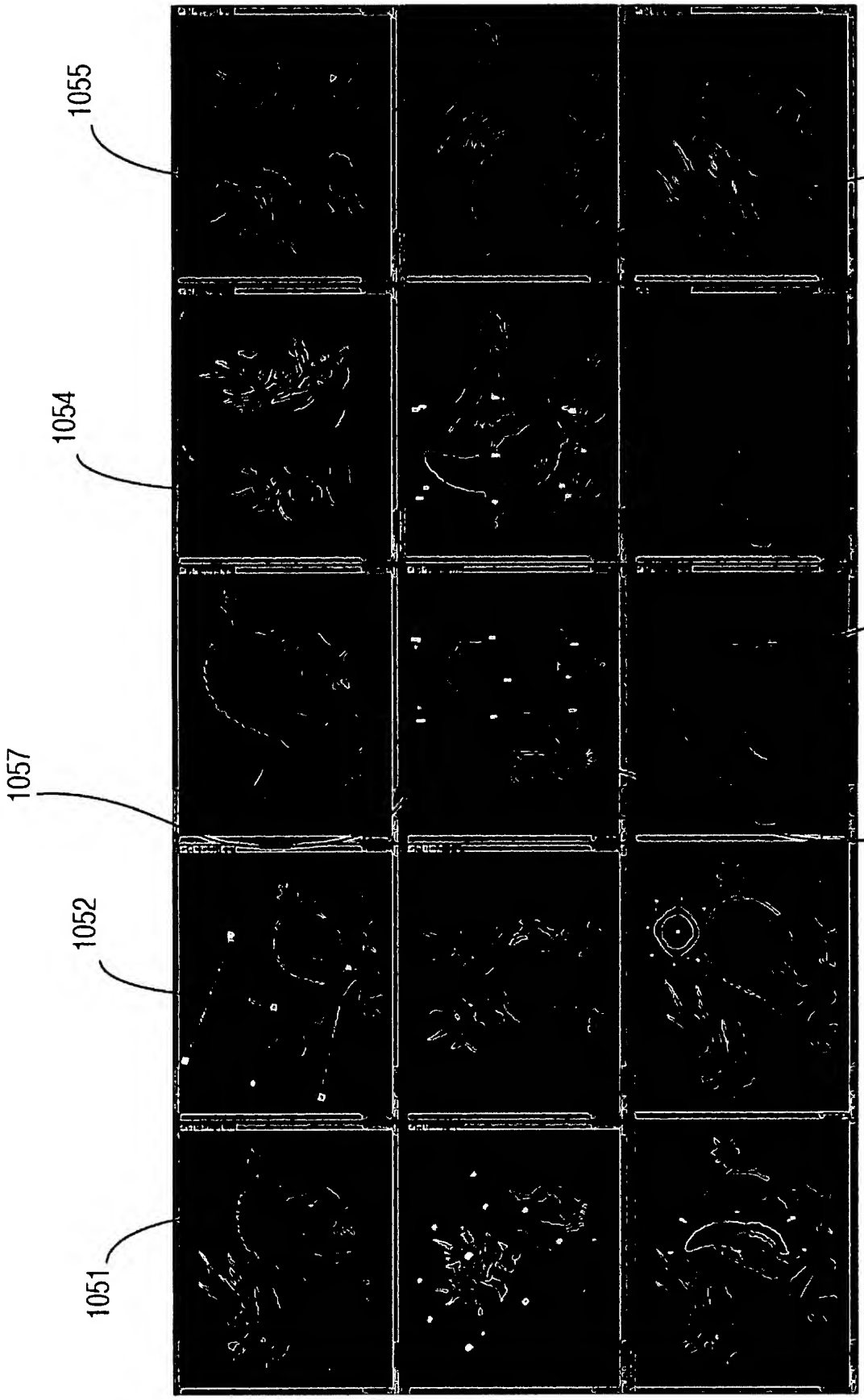

FIGURE 10

	Distance Calculations	Scan Conversion	Closest Point In Set	Fast Marching Methods	Bounding Boxes	Numerical Integration	Narrow Band Methods	**Algorithms**
Input Model Generation	X	X		X			X	
CSG Operations							X	
LS Blending			X		X	X	X	
LS Smoothing/ Sharpening	X				X	X	X	
LS Embossing	X		X		X	X	X	
Morphological Operations				X			X	
Mesh Extraction					X		X	
Modules								

FIGURE 11

REPLACEMENT SHEET
11/13

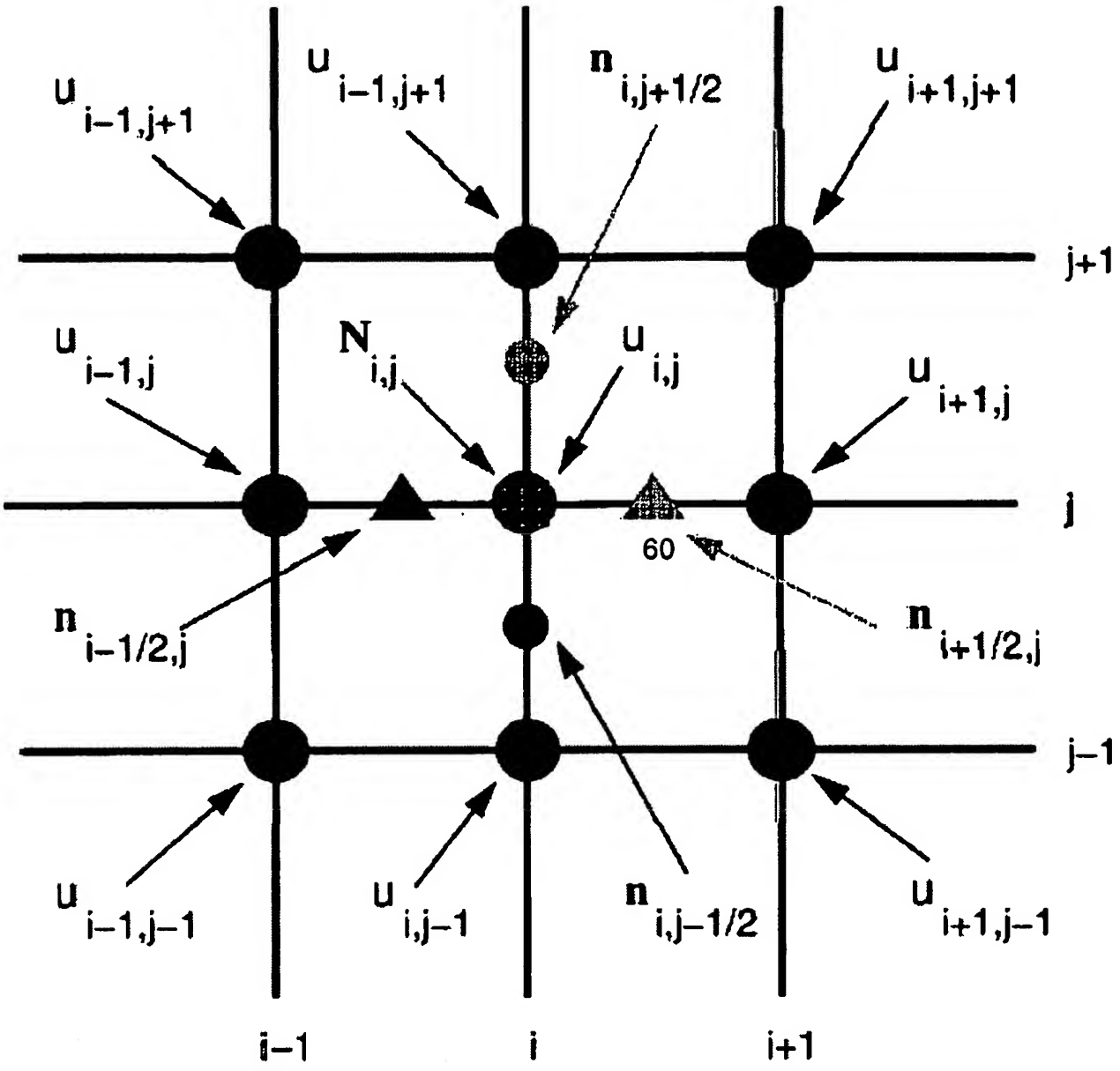
u i−1,j+1
u i−1,j+1
n i,j+1/2
u i+1,j+1
j+1
u i−1,j
N i,j
u i,j
u i+1,j
j
60
n i−1/2,j
n i+1/2,j
j−1
u i−1,j−1
u i,j−1
n i,j−1/2
u i+1,j−1
i−1
i
i+1

FIGURE 12

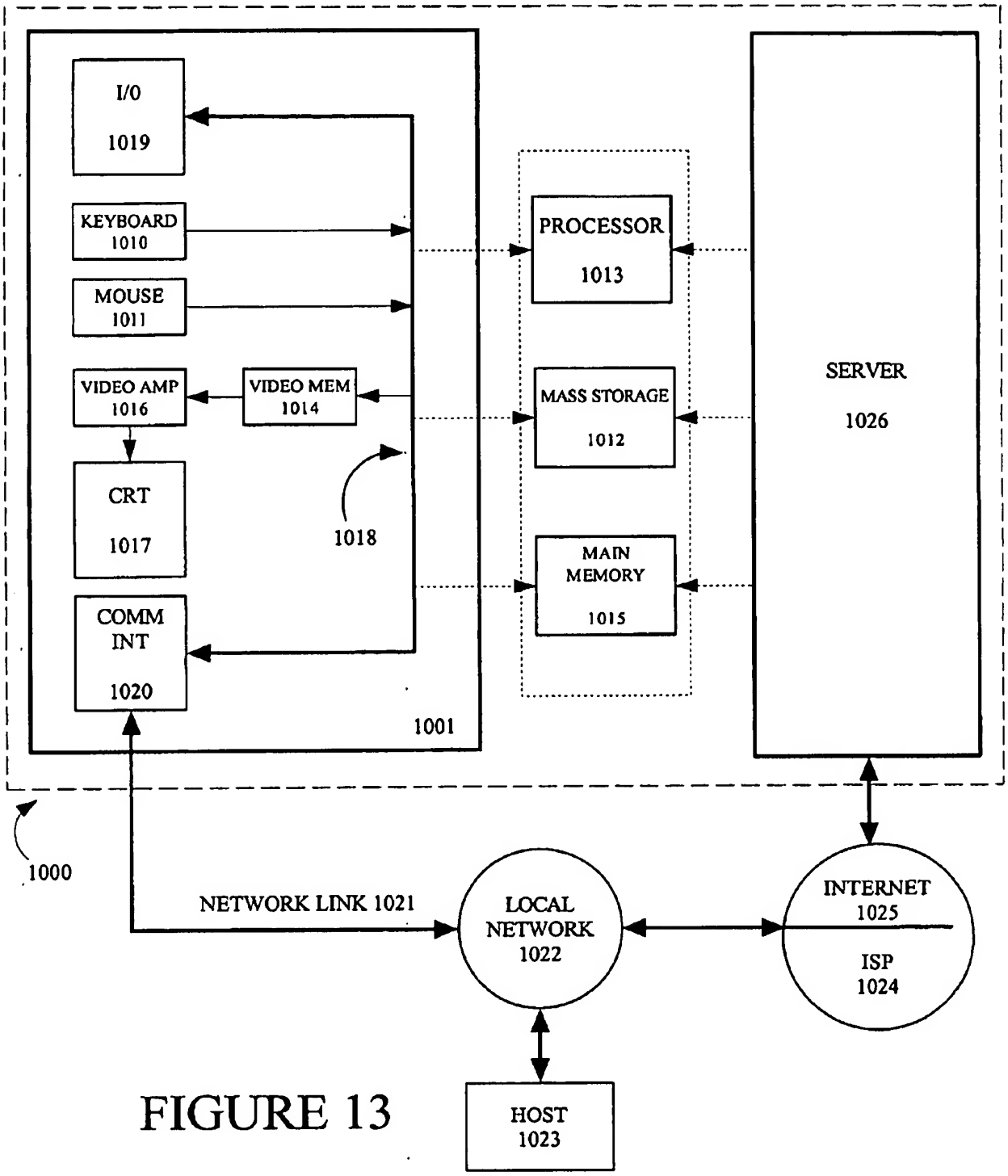
I/O
1019
KEYBOARD
1010
MOUSE
1011
VIDEO AMP
1016
VIDEO MEM
1014
CRT
1017
1018
COMM
INT
1020
1001
PROCESSOR
1013
MASS STORAGE
1012
MAIN
MEMORY
1015
SERVER
1026
1000
NETWORK LINK 1021
LOCAL
NETWORK
1022
INTERNET
1025
ISP
1024
HOST
1023

FIGURE 13